



US007162771B2

(12) **United States Patent**
Grosze et al.

(10) **Patent No.:** **US 7,162,771 B2**
(45) **Date of Patent:** **Jan. 16, 2007**

(54) **FLOOR CLEANING MACHINE WITH DUST CONTROL APPARATUS AND ASSOCIATE METHOD OF USE**

(75) Inventors: **Scott F. Grosze**, Fayetteville, AR (US);
John Stephen Petty, Fayetteville, AR (US); **John L. Obenshain**, Rogers, AR (US)

(73) Assignee: **Alto U.S. Inc.**, Springdale, AR (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 527 days.

(21) Appl. No.: **10/249,741**

(22) Filed: **May 5, 2003**

(65) **Prior Publication Data**

US 2004/0221417 A1 Nov. 11, 2004

(51) **Int. Cl.**
A47L 11/20 (2006.01)

(52) **U.S. Cl.** **15/385**; 15/347; 15/349; 15/246.2

(58) **Field of Classification Search** 15/385, 15/49.1, 98, 325, 347, 349, 409, 246.2; 451/453, 451/119, 456

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,415,372 A 2/1947 Salt et al.
2,663,893 A * 12/1953 Percy 15/385
3,882,644 A 5/1975 Cusumano
4,059,863 A 11/1977 Deuchar et al.
4,178,654 A 12/1979 Mitchell
4,608,727 A 9/1986 Schwab
4,631,775 A * 12/1986 Palmer et al. 15/385

4,720,886 A 1/1988 McLeod et al.
4,731,956 A 3/1988 Wood
4,805,258 A 2/1989 Sitarski et al.
4,910,824 A 3/1990 Nagayama et al.
4,939,811 A 7/1990 Matunaga et al.
5,098,506 A 3/1992 Brown et al.
5,125,190 A * 6/1992 Buser et al. 451/456
5,203,046 A 4/1993 Shaw
5,392,492 A 2/1995 Fassauer
5,522,114 A * 6/1996 Allison 15/385
5,608,939 A * 3/1997 Waldhauser et al. 15/385

(Continued)

OTHER PUBLICATIONS

Pioneer Eclipse®, Speed Star™ Propane Burnisher with Vacuum Operator's Manual, Jul. 28, 2000.

(Continued)

Primary Examiner—Theresa T. Snider

(74) *Attorney, Agent, or Firm*—Blackwell Sanders Peper Martin LLP; Lawrence E. Evans

(57) **ABSTRACT**

A floor cleaning machine with dust control apparatus can assist in capturing dust created as a by-product during normal operations. The dust control apparatus is particularly applicable to propane-powered burnishers that use rotating pads to remove built up wax from hard surface floors. A floating scoop is attached to a floating hoop assembly to direct dust away from the rotating pad. The scoop is located tangentially to the housing that surrounds the rotating pad. An inlet to the housing facilitates airflow through the housing to pick up dust, which exits through the scoop. A containment canister with removable filter is in communication with the scoop. The air and entrained particulate (dust) swirls around the filter in a circular flow path to help separate the particulate from the air. The filtered air exits the canister and returns to the atmosphere.

22 Claims, 4 Drawing Sheets

